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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,769	07/17/2003	Adam Mark Weigold	P07693US01/RFH	9158

881 7590 07/07/2005

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EXAMINER	
HUYNH, KIM NGOC	

ART UNIT	PAPER NUMBER
2182	

DATE MAILED: 07/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/620,769	WEIGOLD ET AL.	
	Examiner	Art Unit	
	Kim Huynh	2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 May 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-50* is/are pending in the application.

4a) Of the above claim(s) *1-17,26-31 and 45-50* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *18-25 and 32-44* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *1 sheet*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of species 7 (claims 18-25 and 32-44) in the reply filed on 5/27/05 is acknowledged. The traversal is on the ground(s) that species 2 (claims 3-7) and species 9 (claim 47) are no distinct patentable features from species 7 because they are both related to locking a local clock to a local reference signal. This is not found persuasive because each of the species includes a distinct patentable feature that is not considered clearly unpatentable (obvious) over the other:

1) Species 2 is directed toward locking a local clock of a USB device to a periodic signal (synchronization between host controller/hub to a USB device) whereas species 7 is directed toward locking each of the plurality of USB devices within the same USB tree to the same frequency (inter-device synchronization).

2) Species 9 requires an apparatus for determining the relative propagation delay of signals from the host USB wherein the reference USB device having circuit to determine and adjust the temporal adjustment/phase offset; these features are not required in species 7.

The restriction requirement is still deemed proper (in accordance with MPEP 806.04(h) and 35 USC 121) and is therefore made FINAL

Claims 18-25 and 32-44 will be considered in this office action and claims 1-17, 26-31 and 45-50 are withdrawn from consideration.

Drawings

The drawings are objected to because black boxes in Figs. 1-4 and 6-11 must be designated with appropriate functions. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 18- 25 and 32-44 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 18, 23 and 44 recite "substantially the same frequency" and claim 22 recites "substantially all". The recited limitation render the claims indefinite because it is unclear what applicant defines as "substantially the same". Correction/clarification required.

When a word of degree is used to modify another word of degree, it is necessary to determine whether the specification provides some standard for measuring those degrees. See Seattle Box Company, Inc. V. Industrial Crating & Packing, Inc., 731 F.2d 818, 221 USPQ 568 (Fed. Cir. 1984). In this case, the specification does not enable one skilled in the art to reasonably establish what may be construed as being not only

within the metes and bounds of the word of degree, but also within the metes and bounds of the word of degree as modified by another word of degree. Therefore, one of ordinary skill in the art would not be apprised as to the claimed invention's scope when the claims are read in light of the specification. See Ex parte Oetiker, 23 USPQ2d 1641.

The following rejections are made based on the examiner's best interpretation of the claims in light of the 35 USC 112 rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 18-25 and 42-44 are rejected under 35 U.S.C. 103(a) as being obvious over Govindaraman (US 6,810,484) in view of applicant admitted prior art (APA, Fig. 1-2) or Chambers et al. (US 6,012,115).

Claims 18-20 and 44, Govindaraman discloses a system for synchronizing an information signal from the host 102 to a USB device 106 wherein the USB device 106 having a macrocell interface 108. The host 102 generates and transmits a specific signal structure in the USB data traffic (data or command signal via Start of Frame SOF packet which is standard in USB communication, col. 6, ll. 9-14, col. 3, ll. 3-5 and col. 4, ll. 1-5). The macrocell interface includes a mixed signal block 200 and receive interface

218 (col. 5, ll. 49-54) for monitoring the USB signals local to the USB device 106 and generating a local reference signal at the USB device 106 from the signal structure signal (informational signal 248, col. 7, ll. 35-45, extracted information from 246 to generate 248 via MUX 225) and locking the frequency of the local clock signal to said USB devices to said local reference signal to a predetermined degree (col. 7, ll. 55-61). Govindaraman also discloses a computer system includes a plurality of USB peripheral devices (printer, scanner, digital camera etc) to the same host (col. 1, ll. 14-18). Govindaramam also discloses that the various type of USB peripheral device (printer, scanner, digital camara) each having a macrocell for generating and locking a local signal based on the information extracted from the signal structure to a local clock frequency based on the rate based on the local clock at which the macrocell of the device is operating (col. 5, ll. 54-63). Govindaramam does not disclose a plurality of devices connecting to the same USB tree. However, such topology is commonly known and as evidenced by Fig 2 of APA and Fig. 1 of Chambers in order to provide a plurality of peripheral device to a host computer. It would have been obvious to one having ordinary skill in the art to realize that each of the USB peripheral device will lock the local clock of each device to substantially the same frequency to a predetermined degreed based on the local clock at which the macrocell of each device operates.

Claim 20-23, Govindaraman discloses the specific structure are command sequences or data sequence sent to the USB device and generating local reference signal for each of the signal structures (col. 4, ll. 1-5, each command/data sequence will be received and processed by the macrocell).), the frequency of the local clock and the

local reference signal is the same (depending of the mode of operation of the device as discussed in col. 5, ll. 54-63).

Claim 24, Govindaraman discloses generating a local reference signal for each of the signal structures and locking the local clock for the purpose of generating a frequency with better stability than pure transfer of data between a host and a respective USB device (better than based on the rate of data transfer, col. 2, ll. 32-36).

Claim 24, APA and Chambers disclose connecting the plurality of USB devices via a common hub 30 or 110 via cables. The length of passive extension cable is dictated by the cable manufactures.

Claims 42-43, Govindaraman discloses each USB device receives a clock signal from an external source or through an additional electrical or optical connector or wireless means (col. 5, ll. 27-30).

Allowable Subject Matter

Claims 32-41 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lueker et al. (US 6,907,096) discloses a system for recover phase information of data transmitted per a first frequency and sampled using a clock at a second frequency.

USB 2.0 Transceiver Macrocell Interface (UTMI) Specification, verion 1.05 is also enclosed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim Huynh whose telephone number is (571) 272-4147.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kim Huynh
Primary Examiner
Art Unit 2182

KH
7/3/05